Amendments to the Claims

Claims 1-10 **(Canceled)**

Claim 11 **(Currently Amended)** A power supply system for selectively supplying power to a load operable with both AC and DC, the power supply system comprising:

a battery operable to store DC power; and

a control circuit operable to (1) supply AC power from an AC power source to the load (i) while the battery is being charged by a DC power source until the battery is fully charged and (ii) when the battery approaches ~~a terminal period of discharging~~ a minimum charge value, and (2) supply the DC power from the battery to the load once the battery has been fully charged.

Claim 12 **(Previously Presented)** A power supply system for selectively supplying power to a load operable with both AC and DC, the power supply system comprising:

a battery operable to store DC power;

a fuel cell operable to generate DC power to charge the battery; and

a three-winding electronic transformer having a first bidirectional terminal connected to the battery, a second bidirectional terminal for connection to an AC power source and a third bidirectional terminal for connection to the load, the first, second and third bidirectional terminals being insulated from each other, wherein

the three-winding electronic transformer is operable to (1) during a first time period, (i) supply AC power from the AC power source to the load while the battery is being charged by the fuel cell until the battery is fully charged and (ii) supply the DC power from the battery to the load once the battery has been fully charged or if the AC power source fails, and (2) during a second time period, (i) supply the AC power from the AC power source to the load and (ii) convert the AC power from the AC power source into DC power and supply the DC power to the battery to charge the battery, and

the fuel cell is operable to charge the battery while the battery is being discharged.

Claim 13 **(Currently Amended)** A power supply system for selectively supplying power to a load operable with only AC, the power supply system comprising:

a battery operable to store DC power;

a fuel cell operable to generate DC power to charge the battery;

a bidirectional ~~DC-DC~~ converter operable to convert the DC power from the battery into a single-phase full-wave rectification waveform by half cycle sinusoidal wave modulation; and

a three-winding electronic transformer having a first bidirectional terminal connected to an output of the bi-directional ~~DC-DC~~ converter, a second bidirectional terminal for connection to an AC power source, a third bidirectional terminal for connection to the load, a high frequency transformer, a first modulation/demodulation semiconductor switch connected between the first bidirectional terminal and the high frequency transformer, a second modulation/demodulation semiconductor switch connected between the second bidirectional terminal and the high frequency transformer and a third modulation/demodulation semiconductor switch connected between the third bidirectional terminal and the high frequency transformer, the first, second and third bidirectional terminals being insulated from each other, wherein

the first modulation/demodulation semiconductor switch includes two unidirectional switches or two pairs of unidirectional switches,

the three-winding electronic transformer is operable to (1) during a first time period, (i) supply AC power from the AC power source to the load while the battery is being charged by the fuel cell until the battery is fully charged and (ii) supply AC power from the DC power stored in the battery to the load once the battery has been fully charged or if the AC power source fails by alternately reversing a high frequency modulation phase of the two unidirectional switches or the two pairs of unidirectional switches of the first modulation/demodulation semiconductor switch per half cycle of a commercial frequency and then demodulating to remove a sinusoidal wave AC output with the third modulation/demodulation semiconductor switch, and (2) during a second time period, (i) supply the AC power from the AC power source to the load and (ii) convert the AC power from the AC power source into DC power and supply the DC power to the ~~DC-DC~~ converter for performing a boost type rectifying operation at a high power to the DC power and supplying the DC power to the battery to charge the battery,

the three-winding electronic transformer is operable to convert the DC power from the battery into the AC power when the battery has been almost fully charged ~~at a light load~~ and the

AC power source has not failed ~~for automatic phase synchronization~~ on a side of the three-winding electronic transformer of the AC power source to achieve a reverse flow of the AC current, and

the fuel cell is operable to charge the battery while the battery is being discharged.

Claim 14 **(Previously Presented)** A power supply system according to claim 11, wherein the DC power source comprises at least one of a wind turbine generator operable to generate DC power to charge the battery, a solar cell operable to generate DC power to charge the battery, and a fuel cell operable to generate DC power to charge the battery.

Claim 15 **(Previously Presented)** A power supply system according to claim 12, further comprising at least one of a wind turbine generator operable to generate DC power to charge the battery and a solar cell operable to generate DC power to charge the battery.

Claim 16 **(Previously Presented)** A power supply system according to claim 13, further comprising at least one of a wind turbine generator operable to generate DC power to charge the battery and a solar cell operable to generate DC power to charge the battery.

Claim 17 **(Previously Presented)** A power supply system according to claim 12, further comprising a controller operable to control operation of the three-winding electronic transformer.

Claim 18 **(Previously Presented)** A power supply system according to claim 13, further comprising a controller operable to control operation of the three-winding electronic transformer.

Claim 19 **(Previously Presented)** A power supply system according to claim 11, wherein the DC power source comprises a fuel cell and compressed hydrogen for the fuel cell can be reserved.

Claim 20 **(Previously Presented)** A power supply system according to claim 12, wherein compressed hydrogen for the fuel cell can be reserved.

Claim 21 **(Previously Presented)** A power supply system according to claim 13, wherein compressed hydrogen for the fuel cell can be reserved.